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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/708,571

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Peng Lee

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MEMPHIS, TN 38119

EXAMINER

JAGAN, MIRELLYS

ART UNIT

PAPER NUMBER

2859

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/708,571	LEE ET AL.	
	Examiner	Art Unit	
	Mirellys Jagan	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 and 42-60 is/are pending in the application.
- 4a) Of the above claim(s) 1-9, 11-25 and 42-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10, 26-30 and 60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

/ DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over the ASTM-C1060-90 standard titled "Standard Practice for Thermographic Inspection of Insulation Installations in Envelope Cavities of Frame Buildings" in view of the publication titled "100's of Tips on Saving Energy and Money at Home" (www.mississauga4sale.com/newsletter/energy_saving_tips.htm) by Argentino.

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Referring to claim 10, ASTM-C1060-90 discloses a method of inspecting building components, the method comprising:

preparing a building for inspection by creating a temperature differential of greater than 10°F between the inside and the outside of the building and maintaining it for a period of time (at least 4 hrs); and then

obtaining temperature profiles of an exterior building wall;

obtaining temperature profiles of the interior of a pitched roof (attic);

obtaining temperature profiles of interior building components;

assessing each profile to detect a thermal anomaly (air leakage/poor insulation) indicative of a problem with the building components; and

reporting the thermal anomaly indicative of a problem to a designated entity (see sections 1.4; 4.1; 5.1; 9.23; 9.41; 10.24; 10.241; 10.2.4.4; X2.2; and X2.4).

ASTM-C1060-90 does not disclose the particular interior building components, obtaining temperature profiles of each electrical circuit in the building, and the preparing step including turning on substantially all light switches and exhaust blowers in the building.

Argentino discloses that energy audits are conducted in a residential building by using an infrared camera to inspect the interior building components for poor energy efficiency. An infrared camera obtains thermal images (temperature profiles) of the detected building components, and will show the presence of air infiltration or poor thermal insulation of the building. The interior building components that should be inspected include the building's electric wires and box, all ducts, and electrical outlets and switches, i.e., electrical circuits, because these are all sources of air infiltration or poor thermal insulation of the building that will

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affect the energy efficiency of the building (see “Insulation” on pages 2-3; “sources of Air Leaks in Your Home” on pages 3-4; and Ducts” on pages 7-8).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of ASTM-C1060-90 by obtaining temperature profiles of all of the electrical circuits and ducts when inspecting the interior components of the building, since Argentino teaches that these are sources of air infiltration that will affect the energy efficiency of the building.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of ASTM-C1060-90 and Argentino by turning on substantially all light switches when testing the electric circuits and turning on substantially all exhaust blowers when testing the ducts in order to determine the location of any thermal anomaly in all of the electric circuits and ducts, i.e. the current in the electrical circuits must be active in order to determine a thermal anomaly in the circuits, and air must be flowing through the ducts in order to determine if there is a thermal anomaly in the ducts.

Lastly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of ASTM-C1060-90 and Argentino by turning on substantially all light switches and exhaust blowers in the building during the preparing step since Argentino teaches that these are sources of air infiltration that will affect the energy efficiency of the building. Therefore, turning them on before obtaining the temperature profiles would have been obvious in order to obtain more accurate temperature profiles of the energy efficiency of the building.

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4. Claims 26-30 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over ASTM-C1060-90 in view of Argentino and the publication titled "Infrared Inspection: Sample Home Inspection" by Boldstar.

ASTM-C1060-90 discloses a method of inspecting interior building components, the method comprising:

obtaining temperature profiles of interior building components;

assessing each profile to detect an anomaly (air leakage/poor insulation) indicative of a problem.

ASTM-C1060-90 does not disclose the interior building components including all of the electrical outlets and assessing their profiles for an anomaly indicating an electrical problem such as overload, contact surface heat, or hot wire; recording the temperature profiles on a digital recording device; and turning on substantially all light switches and exhaust blowers in the building.

Argentino discloses that energy audits are conducted in a residential building by using an infrared camera to inspect the interior building components for poor energy efficiency. An infrared camera obtains thermal images (temperature profiles) of the detected building components, and will show the presence of air infiltration or poor thermal insulation of the building. The interior building components that should be inspected include the building's electric wires and box, all ducts, and electrical outlets and switches because these are all sources of air infiltration or poor thermal insulation of the building that will affect the energy efficiency of the building (see "Insulation" on pages 2-3; "sources of Air Leaks in Your Home" on pages 3-4; and Ducts" on pages 7-8).

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Boldstar discloses a method of inspecting interior building components that includes obtaining temperature profiles of electrical circuits in the building (electrical panel), and assessing the thermal profiles for an anomaly indicative of an electrical problem such as overheating, circuit overload, or connection overheating (i.e., hot wire), wherein the profiles are recorded on a digital recording device (see images).

Referring to claim 26, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of ASTM-C1060-90 by obtaining temperature profiles of all of the electrical outlets and ducts when inspecting the interior components of the building, since Argentino teaches that these are sources of air infiltration that will affect the energy efficiency of the building. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of ASTM-C1060-90 and Argentino by further assessing the profiles of the electrical outlets for an anomaly indicating electrical problems, as disclosed by Boldstar, in order to determine if the circuits are overheating.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of ASTM-C1060-90, Argentino, and Boldstar above by turning on substantially all light switches when testing the electric circuits and turning on substantially all exhaust blowers when testing the ducts in order to determine the location of any thermal anomaly in all of the electric circuits and ducts, i.e. the current in the electrical circuits must be active in order to determine a thermal anomaly in the circuits, and air must be flowing through the ducts in order to determine if there is a thermal anomaly in the ducts.

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Lastly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of ASTM-C1060-90, Argentino, and Boldstar by turning on substantially all light switches and exhaust blowers in the building before obtaining the temperature profiles because Argentino teaches that these are sources of air infiltration that will affect the energy efficiency of the building, and, therefore, turning them on before obtaining the temperature profiles will allow a user to obtain more accurate temperature profiles of the energy efficiency of the building.

Response to Arguments

5. Applicant's arguments that ASTM-C 1060-90 does not relate to exterior residential building components such as exterior wall, eve and facia and interior surface of a pitched roof, plumbing, structural members, and ducts are not persuasive since sections 9.4.1-9.4.2 state that exterior building components are inspected, and section X2.4 states that exterior wall and interior surface of a pitched roof (attic) are inspected. Furthermore, Applicant's arguments regarding plumbing and ducts are not persuasive since these features are not claimed.

Applicant's arguments that the Examiner has failed to establish a prima facie case of obviousness because the cited art fails to disclose the element of "turning on substantially all light switches and substantially all exhaust blowers in said residential building", as claimed in claims 10 and 26, are not persuasive because, to establish a prima facie case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. In this case, the cited prior art (Argentino) teaches obtaining

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temperature profiles of the electrical outlets/circuits and ducts when inspecting the interior components of the building, and assessing the profiles of all of the electrical outlets and ducts for an anomaly indicating an electrical problem to determine if the circuits are overheating and to determine if the ducts are leaking, respectively. Therefore, turning on substantially all light switches and substantially all exhaust blowers in the building ducts when performing such tests is within the knowledge that is generally available to one of ordinary skill in the art because they must be performed in order to inspect all of the electrical outlets and ducts. Furthermore, performing such steps are beneficial because an individual can test all of the electrical outlets and ducts without having to move from one area to another turning each on outlet and duct blowers, i.e., saves time to turn them all on at once and inspect them while they are all on.

Applicant's argument that Argentino fails to disclose the components that can be detected with infrared are not persuasive because Argentino discloses specific interior components that should be tested on pages 3-4 ("Sources of Air Leaks In Your Home").

Applicant's arguments that Argentino does not disclose any limitations of claim 10 because it is not enabling are not persuasive because Argentino teaches certain steps for energy auditing a building ("Energy Auditing Tips"), specific sources of energy leaks that exist in a building ("Sources of Air Leaks In Your Home"), and discloses that IR cameras are known to be used to perform energy audits ("Formulating Your Plan"). These teachings are enabling because they teach a person that an energy audit is performed using IR camera at particular locations within a building. Therefore, the reference is enabling because a person having ordinary skill in the art would be able to perform a test as taught by Argentino. Also, in response to Applicant's arguments that ASTM relates to insulation, i.e., is nonanalogous art, it has been held that a prior

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art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the reference is in the field of applicant's endeavor, which is to perform a thermographic inspection of a building; and is reasonably pertinent to the particular problem with which the applicant was concerned, which is to deterring the thermal integrity of a building using thermographic means.

Applicant's arguments that Boldstar fails to relate to claim 26 because Boldstar discloses taking an image of an electrical panel instead of the claimed electrical outlet are not persuasive because Boldstar was not relied upon to teach testing electrical outlets. Argentino was relied upon to teach testing electrical outlets for thermal leaking problems, whereas Boldstar was relied upon to teach testing for electrical problems.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is 571-272-2247. The examiner can normally be reached on Monday-Friday from 11AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ
February 5, 2007



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